REMARKS

Status Of Application

Claims 1-13 were pending in the application. By this amendment, claims 2, 7, 8, 12, and 13 are cancelled and new claim 14 is added. The status of the current claims is as follows:

Claims 1, 6, and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,184,853 to Hebiguchi et al. ("Hebiguchi") taken with U.S. Patent No. 5,172,107 to Kanno et al. ("Kanno").

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of U.S. Patent No. 5,111,297 to Tsuji et al. ("Tsuji").

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of U.S. Patent No. 5,526,014 to Shiba et al. ("Shiba").

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of U.S. Patent No. 6,243,061 B1 to Sandoe et al. ("Sandoe").

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of U.S. Patent No. 6,628,251 B1 to Ishizuka ("Ishizuka").

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Amendments

Claim 1 has been amended to incorporate the limitations found in original dependent claims 2, 7, and 8. Claim 10 has been amended to incorporate the limitations found in original dependent claims 2, 12, and 13. Thus, these changes do not introduce any new matter.

35 U.S.C. § 103(a) Rejections

The rejection of claims 1, 6, and 11 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi taken with Kanno, is respectfully traversed based on the following.

Note: Amended claim 1 includes the limitations of original claims 2, 7, and 8. Thus, the effective rejection of amended claim 1 would be the combination of Hebiguchi, Kanno, Ozawa, and Nagai. The following discussion is therefore based upon this effective rejection.

Claim 1 includes the limitations of a driver that "drives the respective fields composing one frame so that a scanning order of the fields is non-sequential at least once," and that the liquid crystal material exhibit a cholesteric phase at room temperature. As noted in the Office Action, Hebiguchi does not disclose a driver that drives the respective fields composing one frame so that a scanning order of the fields is non-sequential at least once. For this reason, the Office Action cites Kanno for the proposition of a non-sequential scanning order. Kanno is directed to solving an "image flow problem" as noted in column 7, lines 25-33. This image flow problem is manifested as a flickering and is due to low scanning rates, such as those required at low temperatures for Kanno's ferroelectric liquid crystal material. In contrast, the present invention is directed to solving a "blackout" problem as noted in paragraphs [0004] – [0006] of the present application. This blackout problem is manifested as a stripe pattern and is peculiar to liquid crystals showing a cholesteric phase at room temperature. Kanno's solution thus addresses a first

problem (flicker at low scan speeds) for a first type of liquid crystal material (ferroelectric), while the present invention is directed toward a second problem (blackout/black stripes) for a second type of liquid crystal material (those showing a cholesteric phase at room temperature). Because of the different problems, especially in view of the different liquid crystal materials, there is no suggestion that Kanno's solution will apply to the problem addressed by the present invention. Thus, there is no suggestion to combine Hebiguchi and Kanno to solve the present invention.

In rejecting claim 2, whose limitation has been incorporated in to claim 1, the Office Action relies upon the combination of Hebiguchi, Kanno, and Ozawa. As noted above, Kanno is directed toward a ferroelectric liquid crystal-based display. In contrast, Ozawa is directed to a nematic liquid crystal-based display, *see column 1, lines 10 and 11.* Further, neither liquid crystal corresponds to the cholesteric liquid crystal of claim 1. Given the significant differences in the two different liquid crystal materials, as exemplified by their different required driving waveforms, there is no suggestion that merely substituting one driving waveform for another will be successful. Without an expectation of success, the Office Action has failed to properly combine Hebiguchi, Kanno, and Ozawa.

The Office Action, in rejecting claims 7 and 8, whose limitations have been incorporated into claim 1, relies upon the combination of Hebiguchi, Kanno, and Nagai. As noted above, Kanno is directed to a ferroelectric liquid crystal material. Nagai, in contrast, is directed to a cholesteric liquid crystal material. As the waveforms required to drive various liquid crystal materials, ferroelectrics, cholesterics, and nematics being but a few examples, can vary significantly, there is no suggestion that the substitution of one liquid crystal material for another, without more, will solve the blackout/black stripe addressed by the present invention. Thus, the Office Action has failed to provide proper motivation for combining the disparate liquid crystal technologies represented by Hebiguchi, Kanno, and Nagai.

In sum, claim 1 would require the combination of Hebiguchi, Kanno, Ozawa, and Nagai. Due to the presence of at least three different liquid crystal technologies found within these four patents, there is no suggestion that their combination would produce successful results. As the combination of Hebiguchi, Kanno, Ozawa, and Nagai is therefore improper, the combination of Hebiguchi, Kanno, Ozawa, and Nagai cannot render obvious the invention of claim 1.

Claim 6 depends from claim 1. As the combination of Hebiguchi, Kanno, Ozawa, and Nagai does not render obvious the invention of claim 1, claim 6 is nonobvious for at least the same reasons.

Claim 11 depends from 10. As will be shown below, claim 10 is nonobvious over the combination of Hebiguchi, Kanno, Ozawa, Nagai, and Ishizuka. Because the combination of Hebiguchi, Kanno, Ozawa, Nagai, and Ishizuka fails to render obvious claim 10, claim 11 is nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 1, 6, and 11 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno (and Ozawa and Nagai), be reconsidered and withdrawn.

The rejection of claim 3 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi et al. taken with Kanno as applied to claim 1 hereinabove, and further in view of Tsuji, is respectfully traversed based on the following.

Claim 3 depends from claim 1. As shown above, claim 1 is nonobvious over the combination of Hebiguchi, Kanno, Ozawa, and Nagai. Tsuji appears to be directed to video display technology in general and thus provides no suggestion that the disparate liquid crystal technologies of Hebiguchi, Kanno, Ozawa, and Nagai can be successfully combined. Therefore, the combination of Hebiguchi, Kanno, Ozawa, Nagai, and Tsuji cannot render obvious claim 1. As claim 3 depends from nonobvious claim 1, claim 3 is considered nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno (and Ozawa and Nagai) as applied to claim 1 hereinabove, and further in view of Tsuji, be reconsidered and withdrawn.

The rejection of claim 4 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of Shiba, is respectfully traversed based on the following.

Claim 4 depends from claim 1. As shown above, claim 1 is nonobvious over the combination of Hebiguchi, Kanno, Ozawa, and Nagai. Shiba appears to be directed to active matrix liquid crystal displays using thin film transistors and thus provides no suggestion that the disparate liquid crystal technologies of Hebiguchi, Kanno, Ozawa, and Nagai can be successfully combined. Therefore, the combination of Hebiguchi, Kanno, Ozawa, Nagai, and Shiba cannot render obvious claim 1. As claim 4 depends from nonobvious claim 1, claim 4 is considered nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno (and Ozawa and Nagai) as applied to claim 1 hereinabove, and further in view of Shiba, be reconsidered and withdrawn.

The rejection of claim 9 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of Sandoe, is respectfully traversed based on the following.

Claim 9 depends from claim 1. As shown above, claim 1 is nonobvious over the combination of Hebiguchi, Kanno, Ozawa, and Nagai. Sandoe appears to be directed to active matrix liquid crystal displays using non-linear switching devices and thus provides no suggestion that the disparate liquid crystal technologies of Hebiguchi, Kanno, Ozawa, and Nagai can be successfully combined. Therefore, the combination of Hebiguchi,

Kanno, Ozawa, Nagai, and Sandoe cannot render obvious claim 1. As claim 9 depends from nonobvious claim 1, claim 9 is considered nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno (and Ozawa and Nagai) as applied to claim 1 hereinabove, and further in view of Sandoe, be reconsidered and withdrawn.

The rejection of claim 10 under 35 U.S.C. § 103(a), as being unpatentable over Hebiguchi taken with Kanno as applied to claim 1 hereinabove, and further in view of Ishizuka, is respectfully traversed based on the following.

As shown above, claim 1 is nonobvious over the combination of Hebiguchi, Kanno, Ozawa, and Nagai. Amended claim 10 includes the same distinguishing limitations as claim 1. Claim 10 is therefore considered nonobvious over the combination of Hebiguchi, Kanno, Ozawa, and Nagai for at least the same reasons. Ishizuka appears to be directed to a plasma display panel and thus provides no suggestion that the disparate liquid crystal technologies of Hebiguchi, Kanno, Ozawa, and Nagai can be successfully combined. Therefore, the combination of Hebiguchi, Kanno, Ozawa, Nagai, and Ishizuka cannot render obvious claim 10.

Accordingly, it is respectfully requested that the rejection of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Hebiguchi taken with Kanno (and Ozawa and Nagai) as applied to claim 1 hereinabove, and further in view of Ishizuka, be reconsidered and withdrawn.

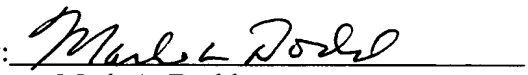
CONCLUSION

In view of the foregoing, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are respectfully requested.

This Response increases the number of independent claims by one (from two to three) but does not increase the total number of claims, and does not present any multiple dependency claims. Separately, if an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Accordingly, no fee based on the number or type of claims is currently due. If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed. Any fee required for such a Petition for Extension of Time or any other fee required by this response, including any fee pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

By: 

Mark A. Dodd
Registration No. 45,729
Attorney for Applicants

MAD/llb:rb
SIDLEY AUSTIN BROWN & WOOD LLP
717 N. Harwood, Suite 3400
Dallas, Texas 75201
Direct: (214) 981-3481
Main: (214) 981-3300
Facsimile: (214) 981-3400
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